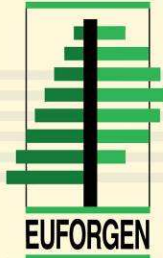


# European networking collaboration on forest genetic resources

Jarkko Koskela  
EUFORGEN Coordinator  
Bioversity International  
Regional Office for Europe, Rome

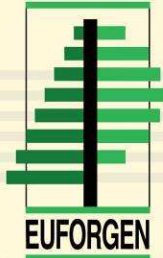
Forest genetic resources in EU policies: challenges and opportunities  
Round-table meeting, Brussels, 8 Feb 2010



# European collaboration

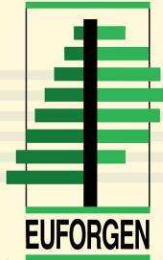
- European Forest Genetic Resources Programme (EUFORGEN)
- Establishment of a European Information System on Forest Genetic Resources (EUFGIS)





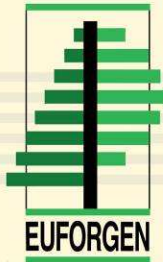
# EUFORGEN

- Promotes conservation and sustainable use of forest genetic resources in Europe
- Established in October 1994 to support implementation of resolutions made by the FOREST EUROPE process (Ministerial Conference on the Protection of Forests in Europe, MCPFE)
  - Resolution S2: Conservation of forest genetic resources, Strasbourg Conference, 1990
  - Resolution V4: Conserving and enhancing forest biological diversity in Europe, Vienna, 2003
  - Warsaw Declaration, 2007



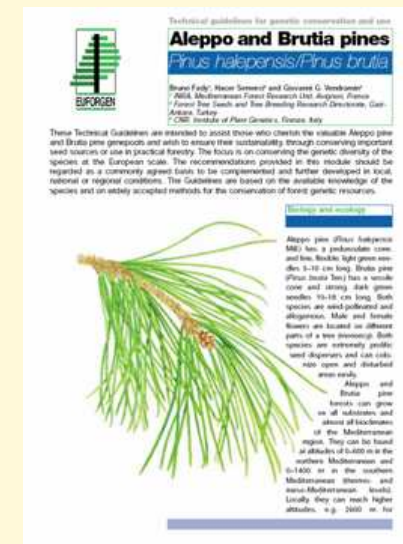
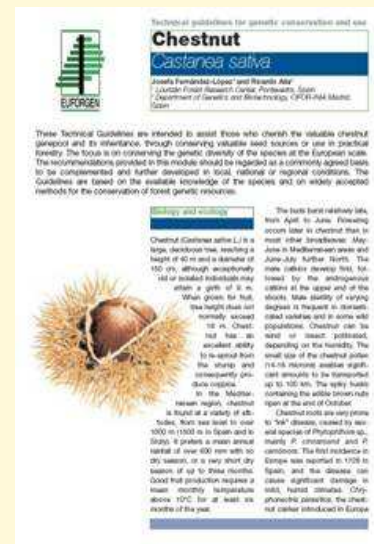
# EUFORGEN

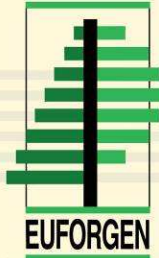
- Member countries (31) (Dec 2009)
- National Coordinators → Steering Committee
- Secretariat (Bioversity International)
- Advisory Committee (Bioversity, FAO)
- EUFORGEN Networks (participated by 101 experts, scientists and managers)
  - Forest Management Network
  - Conifers Network
  - Scattered Broadleaves Network
  - Stand-forming Broadleaves Network



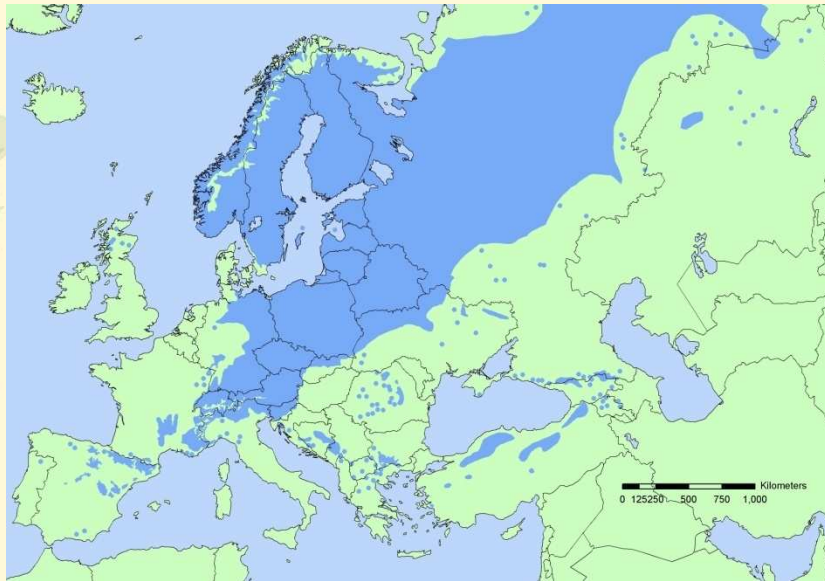
# Technical Guidelines

- Sycamore (*Acer pseudoplatanus*)
- Field maple (*A. campestre*)
- Black alder (*Alnus glutinosa*)
- Chestnut (*Castanea sativa*)
- Common ash (*Fraxinus excelsior*)
- Oriental sweet gum (*Liquidambar orientalis*)
- Wild apple and pear (*Malus sylvestris*, *Pyrus pyraeaster*)
- Black poplar (*Populus nigra*)
- Wild cherry (*Prunus avium*)
- European white oaks (*Quercus petraea*, *Q. robur*)
- Service tree (*Sorbus domestica*)
- Wild service tree (*S. torminalis*)
- Lime (*Tilia cordata*)
- White elm (*Ulmus laevis*)
- Silver fir (*Abies alba*)
- Norway spruce (*Picea abies*)
- Swiss stone pine (*Pinus cembra*)
- Aleppo and Brutia pines (*Pinus halepensis* / *P. brutia*)
- Black pine (*P. nigra*)
- Maritime pine (*Pinus pinaster*)
- Italian stone pine (*Pinus pinea*)
- Scots pine (*P. sylvestris*)





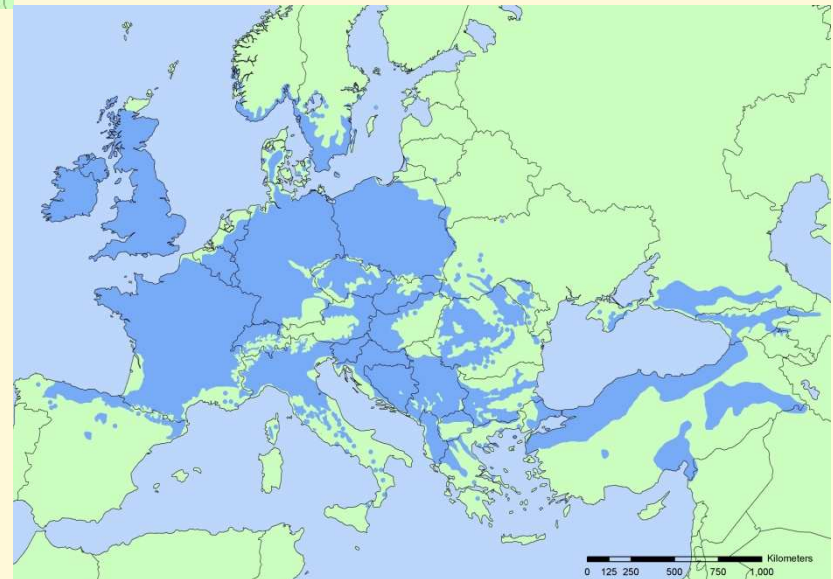
## Distribution maps



Scots pine (*Pinus sylvestris*)

[www.euforgen.org](http://www.euforgen.org)

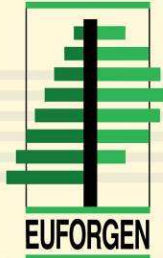
Sessile oak (*Quercus petraea*)





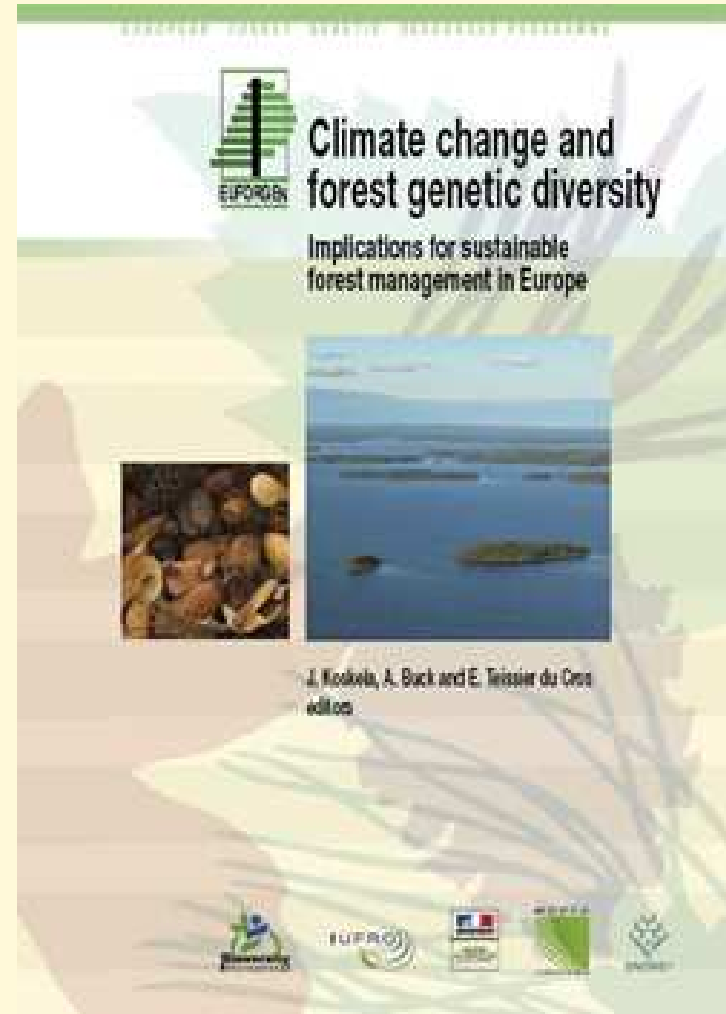
## Other EUFORGEN activities

- Development of gene conservation strategies for forest trees
  - Impacts of climate change on forest management and gene conservation
    - Exchange of information (e.g. policies and practices related to gene conservation and forest management)
- Promotion of practical gene conservation at national level
- Identification of research needs
- Development of research projects and another collaborative actions
- Dissemination platform

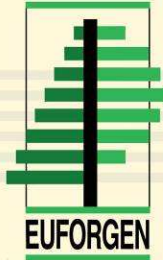


# Climate change and FGR

- Bioversity-IUFRO workshop, Paris, France, 15-16 March 2006
- Part of the MCPFE Work Programme to implement Vienna Resolution 5 (Climate change and sustainable forest management in Europe)
- 78 participants from 25 countries

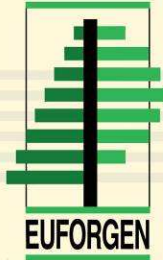






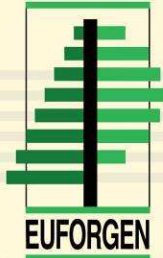
## Phase IV (2010-2014)

- New phase endorsed by the 6<sup>th</sup> meeting of the EUFORGEN Steering Committee, Thessaloniki, Greece, 9-12 June 2009
- Objectives:
  1. Promote appropriate use of forest genetic resources as part of sustainable forest management to facilitate adaptation of forests and forest management to climate change
  2. Develop and promote pan-European gene conservation strategies and improve guidelines for management of gene conservation units and protected areas
  3. Collate, maintain and disseminate reliable information on forest genetic resources in Europe



## Phase IV (2010-2014)

- Working groups (tentative):
  - Pan-European gene conservation strategies
  - Genetic monitoring methods
  - Use and transfer of forest reproductive material
- Workshops
  - FGR documentation/informatics
  - Forest management
  - FGR conservation



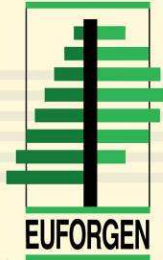
## Collection of FGR data

- Inputs to the MCPFE process on Indicator 4.6 of the pan-European C&I for sustainable forest management:
  - area managed for conservation and utilisation of forest tree genetic resources (*in situ* and *ex situ* gene conservation)
  - area managed for seed production
- Inputs to the development of the FAO State of the World's Forest Genetic Resources (to be released in 2013)
- Establishment of a European Information System on Forest Genetic Resources (EUFGIS)



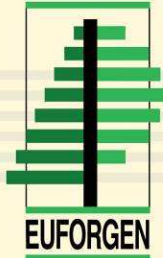
## EUFGIS action

- Project period: April 2007-Sep 2010
- Co-funded by the European Commission (DG Agriculture) (50%), total budget € 1,1 million
- Seven partners:
  - Bioversity International
  - BFW, Austria
  - State Forest Tree Improvement Station, Denmark
  - INRA, France
  - National Forest Centre, Slovakia
  - Slovenian Forestry Institute, Slovenia
  - Forest Research, United Kingdom
- Implemented in collaboration with EUFORGEN (member and associated countries)



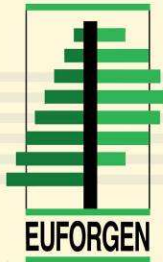
## EUFGIS activities

- Data collection through a network of national focal points (35 countries)
- Workshop on FGR documentation in Europe, Birkerød, Denmark, 23-24 October 2007
- Pan-European minimum requirements and data standards for dynamic gene conservation units
  - Expert group (EUFORGEN Networks, FAO, project partners)
  - Unit level data
  - Target species data



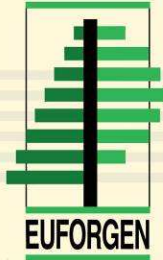
## EUFGIS activities

- Sub-regional training workshops organized for national focal points in 2009
  - Vienna, 24-26 March
  - Ljubljana, 21-23 April
  - Avignon, 5-7 May
  - Copenhagen, 12-14 May
- Helpdesk support for national focal points to compile their data sets
- So far data on 1024 units and 74 target tree species (30 countries)



# Data compilation

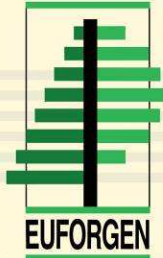




## EUFGIS activities in 2010

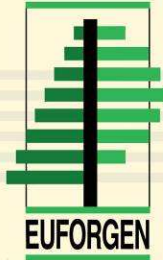
- Data compilation and uploading is continuing
- Documentation manual
- Two case studies
- Finalization of the EUFGIS Portal
- The EUFGIS Portal will be launched at the final meeting in Vienna on 14-16 Sep 2010
- The information system will serve many purposes
  - Pan-European gene conservation strategies
  - MCPFE report
  - SoW-FGR report
  - National FGR activities
  - Research





## EUFGIS activities after 2010

- The information system will be maintained and further developed as part of EUFORGEN Phase IV (2010-2014)
- National focal points will remain responsible for updating the data (once a year or as needed)
- EUFGIS will become a data provider to GBIF and it will be also linked to other relevant portals (e.g. GFIS and EUROFOREST)



[www.euforgen.org](http://www.euforgen.org)



## European Forest Genetic Resources Programme

The European Forest Genetic Resources Programme (EUFORGEN) promotes conservation and sustainable use of forest genetic resources in Europe. A total of 34 countries collaborate in this area as part of the MCPFE process.



**For further information, please contact:**

Dr. Jarkko Koskela  
EUFORGEN Coordinator  
Biodiversity International  
Regional Office for Europe  
Rome, Italy  
E-mail: j.koskela@cgiar.org  
www.euforgen.org

**Outputs**

The outputs of the technical and scientific collaboration within EUFORGEN continue to benefit national efforts in managing forest genetic resources. The outputs include:

- Technical guidelines for genetic conservation and use of forest trees
- Long-term forest genetic resources conservation strategies
- Revised distribution maps of forest trees in Europe
- Publications and public awareness material
- Descriptors and databases
- Collections of genetic material

**Climate change and forest genetic diversity**

Genetic diversity ensures that forest trees can survive, adapt and evolve under climate change. In 2009, a workshop organized by Biodiversity International and the International Union of Forest Research Organizations (IUFRO) discussed the role of forest genetic diversity in mitigating the effect of climate change on European forests and developed recommendations for the future MCPFE work in this regard. This also contributed to the implementation of Vienna Resolution 5 (Climate change and sustainable forest management in Europe).

**Networks**

EUFORGEN operates through networks that bring together scientists, policy-makers and managers from the member countries to exchange information, discuss needs and develop strategies and methods for better management of forest genetic resources.

- Forest Management Network
- Confirers Network
- Scattered Biodiversity Network
- Stand-forming Broadleaves Network

**Objectives**

- Promote practical implementation of gene conservation and appropriate use of genetic resources as an integral part of sustainable forest management
- Facilitate further development of methods to conserve genetic diversity of European forests
- Collect and disseminate reliable information on forest genetic resources in Europe

**EUFORGEN was established in 1994 to implement Strasbourg Resolution S2 (Conservation of forest genetic resources) adopted by the first Ministerial Conference held in France in 1990. It also contributes to the implementation of Vienna Resolution 4 (Conserving and enhancing forest biological diversity in Europe). EUFORGEN is financed by its member countries and coordinated by Biodiversity International in technical collaboration with FAO.**

**Biodiversity International**  
EUFORGEN is coordinated by Biodiversity International  
www.biodiversityinternational.org



[www.eufgis.org](http://www.eufgis.org)



## Establishment of a European Information System on Forest Genetic Resources

The ongoing EUFGIS action (April 2007-September 2010) helps European countries to implement dynamic gene conservation of forest trees and to document these efforts for the improvement of relevant strategies and action plans at pan-European level

**For further information, please contact:**

Dr. Jarkko Koskela  
Biodiversity International  
Regional Office for Europe  
Rome, Italy  
E-mail: j.koskela@cgiar.org  
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**Dynamic gene conservation emphasizes maintenance of evolutionary processes within tree populations to safeguard their potential for continuous adaptation. In the face of climate change, this is crucial for the long-term sustainability of forests and forestry in Europe.**

**Objectives**

- To establish a network of national FGR inventories in 40 countries
- To develop minimum requirements and data standards for dynamic gene conservation units of forest trees at pan-European level
- To create an online information system on the gene conservation units in Europe
- To make available harmonized data on the units across tree species' distribution range in Europe
- To provide training on FGR documentation to national focal points



**European countries have conserved their forest genetic resources (FGR) by establishing gene reserve forests and other conservation units. However, there are differences between the countries in how these units are established and managed, and what data are collected. This makes it difficult to compare and assess the gene conservation efforts between the countries.**

**Project partners**

- Biodiversity International
- Federal Research and Training Centre for Forests, Natural Hazards and Landscape, Austria
- State Forest Tree Improvement Station, Denmark
- Institut National de la Recherche Agronomique, France
- National Forest Centre, Slovakia
- Slovenian Forestry Institute, Slovenia
- Forest Research, United Kingdom

**EUFORGEN is financially supported by the European Commission under Council Regulation (EC) No 873/2004**

**Biodiversity International**  
EUFGIS is coordinated by Biodiversity International  
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